

430 Atlantic Ave.

Rochester, N.Y. 14609

Phone 585-482-3876

Meier Supply Co., Inc. "Tech Tip"

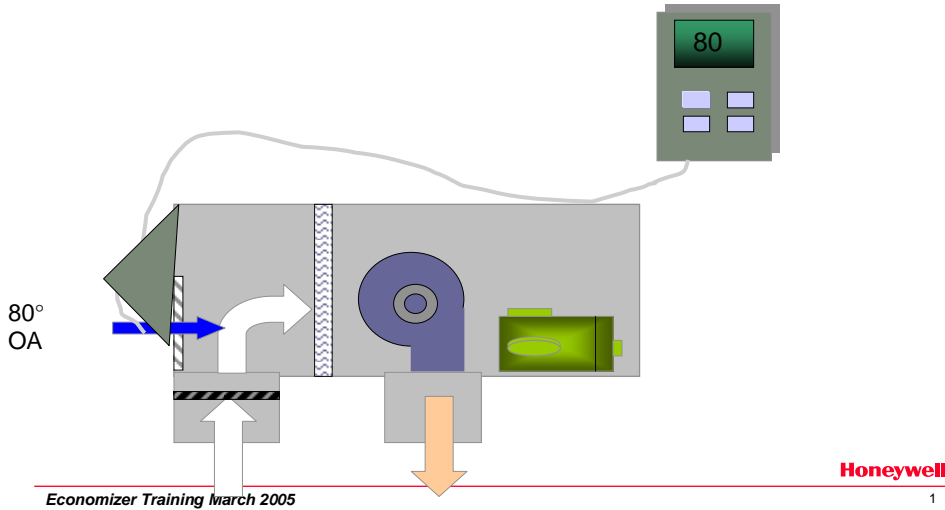
Setting up the minimum position of outdoor air for an economizer.

$$MAT = [(OAT - RAT) \times \% \text{ Ventilation Air}] + RAT$$

MAT = Mixed Air Temp OAT = Outdoor Air Temp % Vent Air = Min Vent Air
 RAT = Return Air Temp

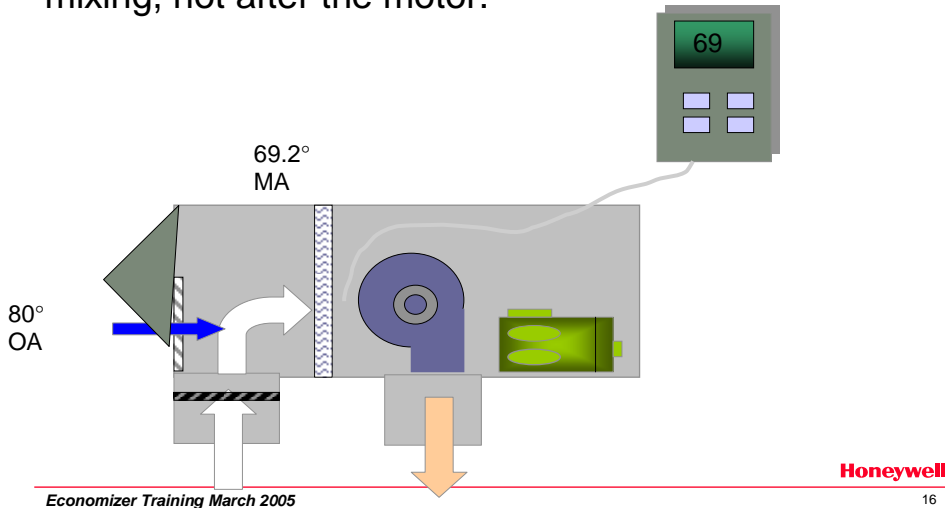
Unit not "calling" for cooling

Outdoor air reading taken at fresh air inlet



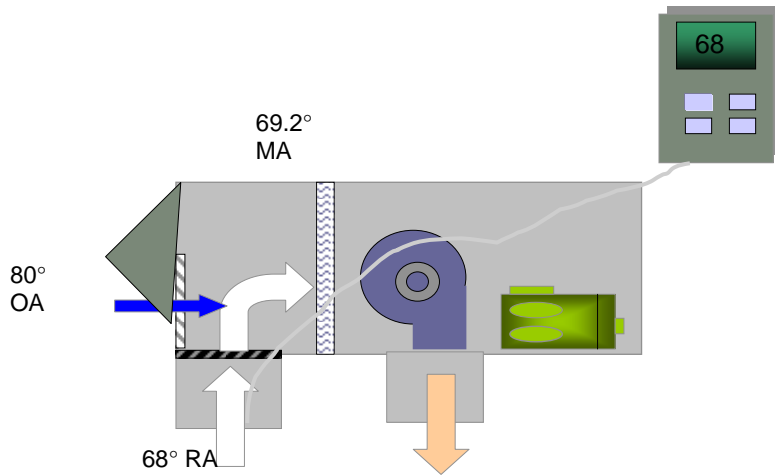
Unit not "calling" for cooling

Mixed air temperature taken at a point of complete air mixing, not after the motor.



Unit not "calling" for cooling

Return air temperature taken in return duct



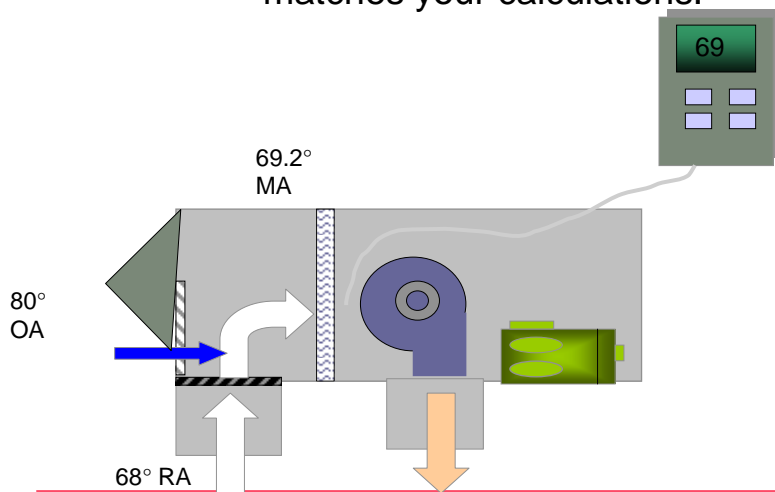
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Unit not "calling" for cooling

Slowly adjust minimum position until this reading matches your calculations.



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$$\begin{aligned} \text{MAT} &= [(\text{OAT} - \text{RAT}) \times \% \text{ Vent Air}] + \text{RAT} \\ \text{MAT} &= [(80\text{F} - 68\text{F}) \times .10] + 68\text{F} \\ \text{MAT} &= [12\text{F} \times .10] + 68\text{F} \\ \text{MAT} &= 1.2\text{F} + 68\text{F} \\ \text{MAT} &= 69.2\text{F} \end{aligned}$$

MAT = Mixed Air Temp OAT = Outdoor Air Temp % Vent Air = Min Vent Air
RAT = Return Air Temp